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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/657,172	09/09/2003	Satoru Horita	P23805	1034

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RESTON, VA 20191

EXAMINER

PETERSON, CHRISTOPHER K

ART UNIT	PAPER NUMBER
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2622

NOTIFICATION DATE	DELIVERY MODE
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03/25/2008

ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

gbpatent@gbpatent.com
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Office Action Summary

Application No.

10/657,172

Applicant(s)

HORITA, SATORU

Examiner

CHRISTOPHER K. PETERSON

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period **will** apply and **will** expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply **will**, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 14 December 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-8 and 10-21 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-8 and 10-21 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 09 september 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date: _____.
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____.

DETAILED ACTION

Response to Amendment

1. The Amendment After Non-Final Rejection filed on 12/14/2007 has been received and made of record. Examiner notes that the Applicant has added new claims 15 - 21. Claims 1 – 8 and 10-21 are pending in this application. Examiner withdraws claim objection to claim 2 for minor informalities.

Response to Arguments

Applicant's arguments with respect to claims 1, 13, and 15 have been considered but are moot in view of the new ground(s) of rejection.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

3. **Claims 1, 5, 8, 13-16, 19 and 20 are rejected under 35 U.S.C. 102(e) as being anticipated by Edgar (US Patent Pub. 2002/0176113).**

As to claim 1 Edgar (Fig. 8a) teaches a filtering device (wrinkle reduction process 800) which filters original image data (original image A), said original image data (A) having original luminance data and color difference data (Para 30), comprising:

- a generating processor (800) that generates first luminance data (high pass filter 806) and second luminance data (blurring algorithm 802) such that said original luminance data (A) is separated into said first luminance data (806) and said second luminance data (802) according to a predetermined ratio (Para 67).
- a filtering processor that filters said second luminance data by a low-pass filter (low pass filter 804) so as to transform said second luminance data(802) into third luminance data (804) while the first luminance data (806) and the color difference data are not low-pass filtered (Para 67 and 68); and
- a synthesizing processor (brush 810) that synthesizes said first luminance data(806), said color difference data, and said third luminance data (804) into synthesized image data(enhanced image). Edgar teaches that the first and third luminance are added together to create a median mask (808) which is then combined with the original image (A). Therefore the two luminance values and the color difference values are synthesized by the brush or applicator (810).
- wherein the third luminance data defines a blurred luminance image and the synthesized image data comprises a soft focus image in which the color balance of the original image data is preserved (Para 69). Edgar teaches the low pass filter 804 is preferably a "soft focus" filter.

As to claim 13, this claim differs from claim 1 only in that the claim 1 is a filtering device apparatus claim whereas claim 13 is a digital camera with filtering device. Thus method claim 13 is analyzed as previously discussed with respect to claim 1 above.

As to claim 14, this claim differs from claim 1 only in that the claim 1 is an apparatus claim whereas claim 14 is a method. Thus method claim 14 is analyzed as previously discussed with respect to claim 1 above.

As to claim 5, Edgar teaches a generating processor (800) generates said first luminance data (high pass filter 806) and said second luminance data (blurring algorithm 802) independently (Para 67).

As to claim 8, Edgar teaches a predetermined ratio is selected from a stepwise series of predetermined ratios (Para 67 and 68). Edgar teaches the low pass filter 804 is calculated as the average of a Gaussian average with a radius of one and a Gaussian average with a radius of three. Other types of low pass filters may be used without departing from the scope of the present invention (Para 67).

As to claims 19 and 20, these claims differ from claim 5 only in that the claim 5 is dependent on claim 1 whereas claim 19 and 20 are dependent on claims 14 and 13 respectively. Thus claims 19 and 20 are analyzed as previously discussed with respect to claim 5 above.

As to claims 15 and 16, these claims differ from claim 8 only in that the claim 8 is dependent on claim 1 whereas claims 15 and 16 are dependent on claims 13 and 14 respectively. Thus claims 15 and 16 are analyzed as previously discussed with respect to claim 8 above.

4. Claim 2 – 4, 10, and 21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Edgar (US Patent Pub. 2002/0176113) in view of Luo (US Patent 7,031,549).

As to claim 2, note the discussion above. Edgar does not teach an image reduction processor and an image restoration processor. Luo (Fig 2) teaches:

- an image reduction processor (decompose quantized gray scale component into n-binary levels (203)) which reduces the image resolution corresponding to said second luminance data before said filtering processor filters (morphologically filter (204)) said second luminance data (Col. 3, line 29 – 59); and
- an image restoration processor recombine filter binary levels into gray level image to produce segmentation result (205) which restores the image resolution, which has been reduced by said image reduction processor (203), after said filtering processor (204) filters said second luminance data (Col. 4, line 29 – 33).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have provided an image reduction processor and an image restoration processor as taught by Luo to the image processor of Edgar, because it enhances the tone reproduction of the digital image (Col. 1, line 66 – Col. 2, line 7 of Luo).

As to claim 3, Luo teaches a second filtering processor (low-pass filter grayscale component via control of segmentation results (206)) which filters said second luminance data which has been filtered by said filtering processor (204) once already, after said image restoration processor (205) restores said image resolution (Col. 4, lines 34 – 52).

As to claim 4, Luo teaches an image resolution is selectable from a stepwise series of predetermined resolutions (Col.3, lines 29 – 42).

As to claim 10, this claim differs from claim 2 only in that the claim 2 is dependent on claim 1 whereas claim 10 is dependent on claim 8. Thus claim 10 is analyzed as previously discussed with respect to claim 2 above.

As to claim 21, this claim differs from claim 2 only in that the claim 2 is dependent on claim 1 whereas claim 21 is dependent on claim 14 respectively. Thus claim 21 is analyzed as previously discussed with respect to claim 2 above.

5. Claims 6, 7, 17, and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Edgar (US Patent Pub. 2002/0176113) in view of Kato (US Patent 7,136,100).

As to claim 6, Edgar teaches a second gamma correction (color decoder 930) to generate said second luminance data (804). Edgar does not teach original image undergoes a gamma correction using a first gamma curve so as to generate said first luminance data. Kato (Fig. 3) teaches an original image undergoes a gamma correction (19) using a first gamma curve so as to generate said first luminance data (Col. 5, line

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62 – Col. 6, line 19). Kato also teaches different gamma curves (19e) (Col. 5, line 62 – Col. 6, line 19).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have provided a gamma correction as taught by Kato to the image processor of Edgar, to obtain high-quality image data while preventing deterioration of image quality (Col. 2, lines 4 – 8 of Kato).

As to claim 7, Kato teaches a second gamma curve is selected from a stepwise series of predetermined gamma curves (19e) (Col. 5, line 62 – Col. 6, line 19).

As to claims 17 and 18, these claims differ from claim 6 only in that the claim 6 is dependent on claim 1 whereas claims 17 and 18 are dependent on claims 13 and 14 respectively. Thus claims 17 and 18 are analyzed as previously discussed with respect to claim 6 above.

6. Claim 11 is rejected under 35 U.S.C. 103(a) as being unpatentable over Edgar (US Patent Pub. 2002/0176113) in view of Luo (US Patent 7,031,549) as applied to claim 10 above, and further in view of Kato (US Patent 7,136,100).

As to claim 11, this claim differs from claim 6 only in that the claim 6 is dependent on claim 5 whereas claim 11 is dependent on claim 10. Thus claim 11 is analyzed as previously discussed with respect to claim 6 above.

7. Claim 12 is rejected under 35 U.S.C. 103(a) as being unpatentable over Edgar (US Patent Pub. 2002/0176113) in view of Luo (US Patent 7,031,549) further in view of Kato (US Patent 7,136,100) as applied to claim 11 above, and further in view of Jogo (US Patent 6,940,620).

As to claim 12, Jogo teaches the extent of the soft focus can be changed. Jogo teaches a soft focus control box (86). The switch can be moved to add or subtract soft focus effect (Fig. 9 of Jogo). The controller of Edgar would then signal the image processor to perform the soft focus function (Col. 4, lines 36 – 50 of Ikeda). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have provided a soft focus as taught by Jogo to the image processor of Edgar and Kato, because it is possible to reduce the moiré in the grayscale image without lowering the image quality (Col. 1, lines 58 – 65 of Jogo).

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the

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shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to CHRISTOPHER K. PETERSON whose telephone number is (571)270-1704. The examiner can normally be reached on Monday - Friday 6:30 - 4:00 EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, NgocYen Vu can be reached on 571-272-7320. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

CKP

/Ngoc-Yen T. VU/
Supervisory Patent Examiner, Art Unit 2622

15 March 2008